

C604G

■ Installation Guide



ubiQuoss

ubiQuoss Inc.

24F Millennium B/D, 467-12 Dogok-Dong
Gangnam-Gu, Seoul 135-700 Korea

TEL: +82-70-8666-5013,4912

FAX: +82-2-2190-3201

E-mail: oversea.group@ubiQuoss.com

www.ubiQuoss.com

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GPON Solution >> C604G

GPON ONT 4-Port Gigabit Ethernet

Overview

The C604G is a GPON ONT for advanced IP service delivery in a single fiber environment to provide bandwidth intensive applications such as broadband Internet and various multimedia services. It supports 4-port Gigabit Ethernet interface and 1 port GPON uplink over single optical fiber. It is designed as an indoor residential device and provides connectivity for internet and IP-based phone. The functionality of ONT is configured and managed by our OLT through OMCI so that OLT monitors ONT status and manage QoS policy, alarm, and software upgrade and so on.

The C604G features VLAN translation, VLAN trunking and tagged/untagged VLAN per Ethernet port which will give network operator versatility to construct network per its own requirements. Also the OAM features are based on standard compliant OMCI to facilitate more convenient and effective network operation.

Features

- ITU-T G.984 GPON compliant
- 4 Ethernet LAN ports supported 10/100/1000Base-T ports
- OMCI
- QoS, CoS
- Dying Gasp support
- 0°C~50°C Operating Temperature
- 5% ~ 95% Humidity(Non-Condensing)

Contents of the Package



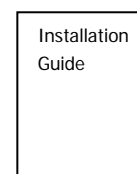
C604G



Power Adaptor



RJ45 Cable



Installation Guide

Precautions



Warning Before you install the C604G, read this section. This section contains important safety information you should know before working with the system.

Power Considerations

- Be careful when connecting the system to the supply circuit so that wiring is not overloaded.
- When plugging in a power socket or handling any power source, avoid ring, necklace, metal watch for better safety. If these materials touch the power socket or ground of the product, the parts can be burnt out.
- Always make sure if there is any possible danger in the workshop. Wet floor, ungrounded extension, rubbed-off power code, or unsafe (or ungrounded) floor might be dangerous.

Installing and Servicing the System

- Before installation, disconnect all power and external cables.
- Remove all jewelry (including rings and chains) or other items that could get caught in the system or heat up and cause serious burns.
- Do not work alone under potentially hazardous conditions.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

Disconnecting Power

When disconnecting power, note the following guidelines.

- Do not touch the power supply when the power cord is connected. Line voltages are present within the power supply even when the power cord is connected.

Connecting Cables

When you connect cables, note the following guidelines.

- Do not work on the system or connect or disconnect cables during periods of lightning activity.

Working with Lasers

If your system includes a fiber-optic port, note the following guidelines.

- To avoid exposure to radiation, do not stare into the aperture of a fiber-optic port. Invisible radiation might be emitted from the aperture of the port when no fiber cable is connected.
- Always keep unused fiber-optic ports capped with a clean dust cap.

Preventing EMI

- When you run wires for any significant distance in an electromagnetic field, electro magnetic interference (EMI) can occur between the field and the signals on the wires.
- Bad plant wiring can result in radio frequency interference (RFI).
- Strong EMI, especially when it is caused by lightning or radio transmitters, can destroy the signal drivers and receivers in the system, and can even create an electrical hazard by conducting power surges through lines and into the system.
- If Strong EMI occurs in the installation place, consult RFI experts to get rid of it.

Disposing of the System

Dispose of the system and its components (including batteries) as specified by all national laws and regulations.

Installation


Warning


Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments.

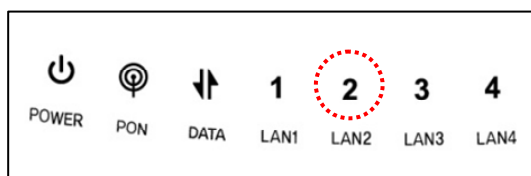
1. Connect the SC/APC connector on the side of a yellow single-mode optical fiber into the optical terminal of the optical outlet and the other connector into the PON port of C604G by pushing them until you hear a clicking sound.
2. Connect C604G and PC with Ethernet cable.
3. Connect C604G and IP Phone with Ethernet cable.
4. Connect the rated power adaptor (12V 1.5A) provided together with C604G.



5. Make sure that the POWER LED is ON.



6. Make sure that LAN LED is ON.



7. Make sure that the PON LED is ON in several seconds or minutes. If PON LED is red, the optical signal is very low, so please contact the service provider.
8. If everything is installed properly, the user can see the DATA LED blink while Internet data is sent / received.

ONT Shape

C604G consists of Front panel and Real panel. Front panel has ONT status LED. Real panel has ONT ports.

Front Panel



LED



Name	Color	Status	Function	Actions to take
PWR	BLUE	ON	Power ON	
		OFF	Power OFF	Check to connect power adapter & power outlet
PON	BLUE	ON	Link Up (Normal)	Normal Operation
		BLINK (Every 1 sec)	Link Down. Optic signal ON	Call Service Provider
	RED	ON	Optical signal has been lost	Call Service Provider
Data	BLUE	OFF	No Data transmitting/receiving	Call Service Provider
		BLINK	Transmitting/receiving Data	Normal Operation
LAN 1~4	BLUE	ON	1000Base-T Ethernet Link Up	Normal Operation
		BLINK	1000Base-T Transmitting/Receiving Ethernet data	Normal Operation
		OFF	1000Base-T Ethernet Link Down	Check cable at PCs
	RED	ON	100Base-TX Ethernet Link Up	Normal Operation
		BLINK	100Base-TX Transmitting/Receiving Ethernet data	Normal Operation
		OFF	100Base-TX Ethernet Link Down	Check cable at PCs

Rear Panel



The following table describes the ports of ONT.

Port Description

Indication	Description
	GPON Port
LAN 1~4	Gigabit Ethernet Ports
12V  1.5A	Power Terminal

Troubleshooting:



Symptom: Can not access to the Internet;

- Step 1** Make sure that the ONT is turned on. Once you turn on the power, the PWR LED on the front panel of C604G should be turned on. If the PWR LED is turned OFF, please check if the power cable is connected to the power inlet of ONT properly. If the problem persists, please call Service Provider.
- Step 2** Make sure that the optical line is connected properly. Once the optic fiber is connected, the PON LED on the front panel of C604G should be turned on within few seconds. If the PON LED blinks, call Service Provider to check the optical line connection.
- Step 3** Make sure that the LAN cable is connected properly. Once the LAN cable is connected and user PC is turned on, LAN LED should be turned on. If the LED is not turned on, check the cable connection.
- Step 4** Make sure that network setting of your PC is correct. Select "set to 'Obtain IP address automatically'".

Symptom: All the cables are connected, but still can not obtain IP address

- Step 1** Look for the Network Neighborhood or My Network Places icon in your desktop. If it is not there, try your Start Menu.
- Step 2** Right-click the Network Neighborhood/My Network Places icon. A drop-down menu will appear.
- Step 3** Choose the "Properties" option, generally found at the bottom of the menu.
- Step 4** Look for an icon named "Local Area Connection". The icon looks like a pair of computer connected by a link. Double-click this icon.
- Step 5** Click the "General" tab, if it is not already selected. You will see a list of protocols to choose from.
- Step 6** Scroll down and choose Internet Protocol (TCP/IP), and then click the button that is labeled "Properties".
- Step 7** Again, click the "General" tab, if it is not already selected. You will see two choices:
1) "Obtain an IP address Automatically"
2) "Use the following IP address..."

Step 8 Choose 1) option

Step 9 Click OK

Specification

The following table shows the specification of C604G.

Specification

Item	Description
SYSTEM HW ARCHITECTURE	<ul style="list-style-type: none"> • 4 Port 10/100/1000 Base-T Ethernet data interfaces • Ethernet port auto negotiation or manual configuration • MDI/MDIX automatic sensing • AC Adapter input 100 ~ 240 volts , 50/60 Hz • Power Input 12V, 1.5A (feed via external AC/DC adapter) • 180mm(W) x 135mm(D) x 40mm(H) SFU-Type Dimension • 0℃~50℃ Operating Temperature • Dying Gasp support • Power Consumption MAX 5W
NETWORK FEATURES	<ul style="list-style-type: none"> • 256 MAC addresses and 16 VLAN groups • VLAN translation, VLAN trunking • Customer VLAN tagged (802.1p), priority, tagged and untagged frames • IGMP v2/v3 snooping
PON FEATURES	<ul style="list-style-type: none"> • ITU-T G.984 GPON compliant (984.1/.2/.3/.4) • Compliant to FSAN G.984.2 specifications • 1310nm Tx, 1490nm Rx • 1244Mbps Tx / 2488Mbps Rx asymmetric data rate • Burst mode upstream transmission • 20km reach • GR-468-CORE compliant SC/APC connector • Multiple T-CONTs, Multiple Port-IDs • NSR/SR DBA • Upstream and Downstream FEC • AES-128 decryption • 512 Port-Ids • 8 Transmission Container • Maximum 2.488 Gbps Downlink/1.244 Gbps Uplink
QoS / Security FEATURES	<ul style="list-style-type: none"> • IP ToS/DSCP to 802.1p mapping • CoS based on VLAN-ID, 802.1p bit, ToS/DSCP • Marking/remarking of 802.1p • QoS Support with 4-traffic classed based on arrival port, IEEE802.1p, Ipv4 TOS • Mac Address Limit for Mac Spoofing Attack • Static Mac Address
QAM	<ul style="list-style-type: none"> • Standards-compliant OMCI as defined in ITU-T G.984.4 and G.983.2 • Management Information Base (MIB) manipulation over OMCI by Create, Delete, Set, Get and Get Next commands • Provisioning for all services including Ethernet, IPTV, etc. • Alarming and AVC report, performance monitoring • Remote image download over OMCI, as well as activation and rebooting • Holds two F/W banks for image integrity and rollback